

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-13 (Canceled).

Claim 14 (New): A method for automatically forming a document link that links a portion of a first document with a portion of a second document, the method comprising:

describing at least two portions of respective documents, each having a characteristic, using an Atom predicate expression;

describing at least one link establishing condition configured to specify portions of first and second documents to be linked using a Horn clause predicate expression including the Atom predicate;

registering the at least one link establishing condition in a file;

running a prescribed program configured to calculate the at least one link establishing condition while referring to the file; and

forming at least one document link between the at least one pair of the portions of the first and second documents, specified by the prescribed program.

Claim 15 (New): A method of Claim 14, wherein the at least one link describes a nature of document elements of the first document and the second document, wherein the first document is a link source and the second document is a linking destination.

Claim 16 (New): A computer program product of Claim 15, wherein the at least one link derives document elements of the first document of the link source and the second

document of the linking destination satisfying the link establishing condition on a basis of a backtrack calculation to bind a variable based upon a document information retrieval.

Claim 17 (New): A system for automatically forming a document link that links a portion of a first document with a portion of a second document, the system comprising:

means for describing at least two portions of respective documents, each having a characteristic, using an Atom predicate expression;

means for describing at least one link establishing condition configured to specify portions of first and second documents to be linked using a Horn clause predicate expression including the Atom predicate;

means for registering the at least one link establishing condition in a file;

means for running a prescribed program configured to calculate the at least one link establishing condition while referring to the file; and

means for forming at least one document link between the at least one pair of the portions of the first and second documents, specified by the prescribed program.

Claim 18 (New): A system of Claim 17, wherein the at least one link describes a nature of documents elements of the first document and the second document, wherein the first document is a link source and the second document is a linking destination.

Claim 19 (New): A system of Claim 18, wherein the at least one link derives document elements of the first document of the link source and the second document of the linking destination satisfying the link establishing condition on a basis of a backtrack calculation to bind a variable based upon a document information retrieval.

Claim 20 (New): A medium storing a computer program product for automatically forming a document link that links a portion of a first document with a portion of a second document, comprising:

- a first computer code configured to describe at least two portions of respective documents, each having a characteristic, using an Atom predicate expression;
- a second computer code configured to describe at least one link establishing condition configured to specify portions of first and second documents to be linked using a Horn clause predicate expression including the Atom predicate;
- a third computer code configured to register the at least one link establishing condition in a file;
- a fourth computer code configured to run a prescribed program configured to calculate the at least one link establishing condition while referring to the file; and
- a fifth computer code configured to form at least one document link between the at least one pair of the portions of the first and second documents, specified by the prescribed program.

Claim 21 (New): A computer program product of Claim 20, wherein the at least one link describes a nature of documents elements of the first document and the second document, wherein the first document is a link source and the second document is a linking destination.

Claim 22 (New): A computer program product of Claim 21, wherein the at least one link derives document elements of the first document of the link source and the second document of the linking destination satisfying the link establishing condition on a basis of a backtrack calculation to bind a variable based upon a document information retrieval.